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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,899	04/12/2004	Hachiro Hirano	251807US0CONT	2488
22850 7590 01/17/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER NGUYEN, NGOC YEN M	
			ART UNIT 1754	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			01/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/821,899

Applicant(s)

HIRANO ET AL.

Examiner

Ngoc-Yen M. Nguyen

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4-6, 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Osborne et al (4,855,276).

Osborne '276 disclose a process for making an adsorbent composition, consisting essentially of the steps of:

(a) forming a mixture in water of the following components in the following proportions: from about 5% to about 90% finely divided carbon, from about 5% to about 90% alumina, and from about 5% to about 80% sodium bicarbonate;

(b) forming said mixture into at least one cohesive unit; and

(c) curing said unit at a temperature of from about 100 to about 225°F. until said water is from about 5% to about 30% by weight of the composition.

The adsorbent can be used to remove chlorine from gas streams (note column 5, lines 43-45 and column 8, lines 35-42).

The alumina is considered as the claimed "inorganic oxide".

The process and product of Osborne '276 anticipate the claimed process and product.

Claims 1, 2, 4, 12-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Hayasaka et al (6,649,082).

The 102 (e) for Hayasaka '082 appears to go back to the filing date of the provisional application, which is July 6, 2000.

Hayasaka '082 discloses a method for rendering halogen-containing gas harmless, comprising contacting a gas containing halogen-containing gas with an agent comprising 10-40wt% of an iron oxide, 20-80 wt% of an alkaline earth metal compound and 10-40 wt% of an activated carbon (note claims 1 and 9).

The 80% for the alkaline earth metal compound and the range for the activated carbon are well within the claimed ranges.

Hayasaka '082 discloses that the agent is produced by blending the raw materials, kneading and granulating (note column 9, lines 1-13).

The agent is preferably has a slight water content so as to exert the effect as a harm-removing agent for chlorine or sulfur dioxide gas (note column 9, lines 20-22). Also, the dry etching exhaust gas containing the halogen-containing gas may be in the dry state or wet state. The slight water content and the wet state of the exhaust gas fairly teaches that the method of Hayasaka '082 is carried out under the presence of water.

Art Unit: 1754

The halogen-containing gas can be a halogen gas such as chlorine (note claim 8 and column 9, lines 20-22).

The alkaline earth metal compound is at least one selected from the group consisting of oxides, hydroxides, and carbonates of magnesium, calcium, strontium and barium (note claim 2).

The exhaust gas in Hayasaka '082 can be a gas discharged from a dry etching or cleaning step in a manufacturing process of a semiconductor device (note column 1, lines 14-20).

Since the agent in Hayasaka '082 contains activated carbon and used in the same process of removing halogen series gas, it would have the same "discoloring" effect as required in the instant claim 13.

The process and product of Hayasaka '082 anticipate the claimed process and product.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayasaka '082.

Hayasaka '082 discloses a process and product as mentioned in the above rejection.

For other values other than the end point for the solid base, i.e. the alkaline earth metal compound, the range disclosed in Hayasaka '082 overlaps the claimed range. With respect to the encompassing and overlapping ranges previously discussed, the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time of invention to select the portion of the prior art's range which is within the range of the applicants' claims because it has been held prima facie case of obviousness to select a value in a known range by optimization for the results. *In re Boesch*, 205 USPQ 215. Additionally, the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness. *In re Malagari*, 182 USPQ 549.

Hayasaka '082 discloses that a zeolite can further be used (note claim 14).

Hayasaka '082 further discloses that for increasing the hardness, the granulated product is dried at 100-150°C. The particle size of the harm-removing agent is from 0.5 to 10 mm, preferably from 1 to 5 mm (note column 9, lines 38-40).

For the properties of the activated carbon or for the granules, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the activated carbon with appropriate properties in the process of Hayasaka '082 to produce the granules suitable for the process of removing halogen-containing gas.

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osborne '276, optionally in view of Hayasaka '082 and Hirano et al (6,685,901).

For other values other the end points disclosed in Osborne '276, the ranges disclosed in Osborne '276 overlaps the claimed ranges, see In re Malagari as stated above.

For the dependent claims, see the reasons as stated above.

Optionally, Hayasaka '082 can be applied to teach the use of a zeolite and the desired particle size for the granules.

Optionally, Hirano '901 can be applied to teach the desired hardness for the granulated product in a process for removing chlorine from a gas (note claims 1 and 7).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

It is noted that no 1449 form was filed with the IDS filed on June 21, 2004.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc-Yen M. Nguyen whose telephone number is (571) 272-1356. The examiner is currently on a Part time schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone

Art Unit: 1754

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Ngoc-Yen M. Nguyen
Primary Examiner
Art Unit 1754

nmn
January 8, 2007